

Model AF22 Dual Beam Absorbance Sensor

Wedgewood Technology Inc.
300 Industrial Road
San Carlos, CA 94070
Ph. (650) 593-1598
Fax (650) 593-0235
www.wedgewoodtech.com

Overview

The Model AF22 Dual Beam Absorbance Sensor is used in conjunction with the Model 682 and Model 683 Dual Beam Photometers. Together they measure the spectral absorbance of process liquid at a specific point in the visible or near infrared regions of the electromagnetic spectrum. Typical applications are APHA, ASTM and EBC color and water in alcohol measurements.

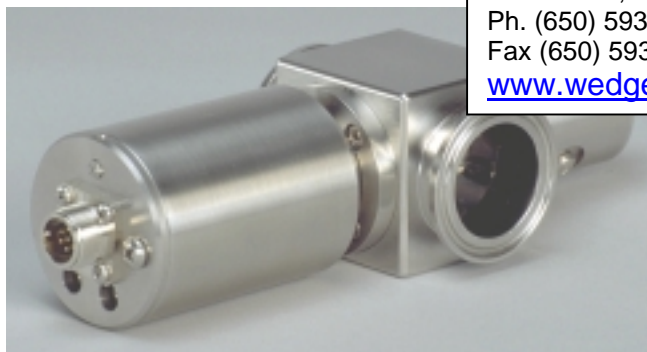
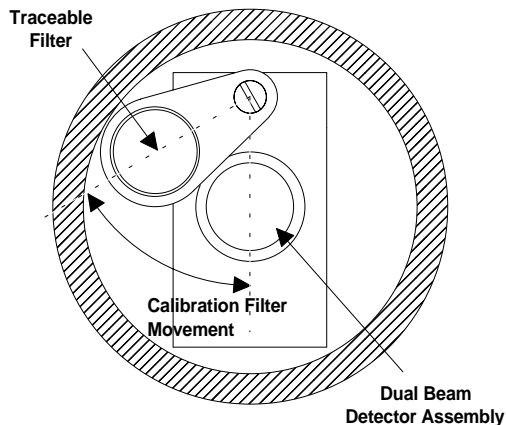
Construction

Each sensor consists of a flowcell with Pyrex, quartz or sapphire windows, lamp housing and measurement detector assembly. The sensor body is fabricated from stainless steel as standard and a variety of seals can be specified to suit a wide range of process fluids.

Installed within the lamp housing is a high output, miniature halogen lamp. Light from this lamp is directed through the sensor process wetted path towards the optical detectors.

The detector housing has two separate detectors installed, one for measurement and one as a reference monitoring and correcting for other absorptive material in the process, making the unit insensitive to disturbances (such as turbidity) in the process stream.

Traceable filter operation in the Model AF22 detector housing



Connections

Process connections are available from 1/4" up to 4". Standard connection types are sanitary Tri-Clover, raised face flange, flat faced flange, RTJ and NPT. Other types (such as DIN flanges, JIS flanges and other sanitary styles) are available to order. The sensor is electrically connected to the Model 682/683 photometer by two cables with waterproof connectors. The sensor and cable connectors are sealed and mechanically resilient.

Traceable Calibration

Once calibration has been carried out, a reference value from a built-in traceable filter is established to allow non-liquid calibration to be performed on the system in the future, making maintenance very simple.

The filter positioning mechanism is operated using a swing pin on the rear of the housing.

AF22 Features and Specifications

Model AF22 Sensor Features

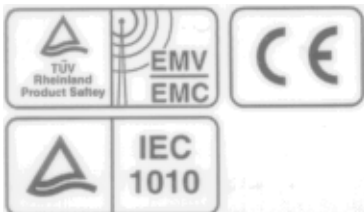
- Constructed from corrosion resistant stainless steel as standard
- Unique built-in liquid free calibration standard
- Choice of seal materials for process compatibility
- Long life high output halogen lamp
- NEMA 4X / IP65 environmental specification
- Versatile sensor can be applied to many applications and uses
- Sanitary sensors internal finish better than 0.4 μ m (16 μ inch) R_a
- Wide variety of process connection styles
- Local electrical connectors allow simple removal from line
- Choice of materials of construction
- Optical windows can be Pyrex glass, quartz, or sapphire

Model AF22 Sensor Specifications

Signal Outputs	Dual channel current to a Model 682/Model 683 Dual Beam Photometer.
Process Connections	A wide variety of process connection types are available.
Sensor Materials	316/316L Stainless Steel Kynar™ Other materials available upon request.
Windows	Pyrex, quartz or sapphire (application and pressure dependent)
Seals	Buna 'N', Viton, silicone, EPR, EDPM, Kalrez available as standard. Others to order.
Lamp	Incandescent lamp rated to 10,000 Hours. Power supplied by connected photometer.
Lamp Housing	NEMA 4X / IP65 Optionally explosion-proof - rated to Class 1, Division 1, Groups B, C and D / EExd IIC T5
Filters	Selected for the application
Detectors	Silicon photocurrent cells, hermetically sealed, linear for 9 decades
Operating Temperature	0 to 100 °C continuous

Options Available

- Explosionproof Lamp Housing
- Custom Pathlengths
- Custom Wavelengths
- Custom Materials and Seals
- Wide Variety of Process Connection Styles
- High Temperature Versions
- Dry Air Purge
- Wiper System
- Calibration Reference Rod System



Call your local representative or factory for additional details.